

ABSTRACT

A Rankine cycle system is provided in which, in order to make a pressure (P) of a gas-phase working medium at the inlet of an expander (13) coincide with a target pressure (P_O), a feedforward value (N_{FF}) is calculated on the basis of the target pressure (P_O) and a flow rate (Q) of the gas-phase working medium at the outlet of an evaporator (12), a feedback value (N_{FB}) is calculated by multiplying a deviation (ΔP) of the pressure (P) of the gas-phase working medium at the inlet of the expander (13) from the target pressure (P_O) by a feedback gain (k_p) calculated on the basis of the flow rate (Q) of the gas-phase working medium, and the rotational speed of the expander (13) is controlled on the basis of the result of addition/subtraction of the feedforward value (N_{FF}) and the feedback value (N_{FB}). It is thereby possible to control the pressure of the gas-phase working medium at the inlet of the expander at the target pressure with high precision without changing the amount of liquid-phase working medium supplied to the evaporator.